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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. | | | | | | | | | | | | | | |
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| 10/733,683 | 12/12/2003 | Seon-Soo Rue | P56923 | 9043 | | | | | | | | | | | | | | |
| 7590 Robert E. Bushnell Suite 300 1522 K Street, N.W. Washington, DC 20005 | | 03/04/2008 | <table border="1"><tr><td colspan="2">EXAMINER</td></tr><tr><td colspan="2">AJIBADE AKONAI, OLUMIDE</td></tr><tr><td>ART UNIT</td><td>PAPER NUMBER</td></tr><tr><td>2617</td><td></td></tr><tr><td colspan="2"><table border="1"><tr><td>MAIL DATE</td><td>DELIVERY MODE</td></tr><tr><td>03/04/2008</td><td>PAPER</td></tr></table></td></tr></table> | | EXAMINER | | AJIBADE AKONAI, OLUMIDE | | ART UNIT | PAPER NUMBER | 2617 | | <table border="1"><tr><td>MAIL DATE</td><td>DELIVERY MODE</td></tr><tr><td>03/04/2008</td><td>PAPER</td></tr></table> | | MAIL DATE | DELIVERY MODE | 03/04/2008 | PAPER |
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| AJIBADE AKONAI, OLUMIDE | | | | | | | | | | | | | | | | | | |
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| 03/04/2008 | PAPER | | | | | | | | | | | | | | | | | |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/733,683

Applicant(s)

RUE, SEON-SOO

Examiner

Olumide T. Ajibade-Akonai

Art Unit

2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5, 12-15, 18-24, 27 and 28 is/are rejected.
- 7) ☒ Claim(s) 4, 6-11, 16, 17, 25 and 26 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 December 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>12/12/2003, 06/15/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings are objected to because of minor informalities. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 27 and 28 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims 27 and 28 claim a computer-readable medium where the specification specifically mentions examples of the computer-readable medium that include electromagnetic media, infrared media or carrier waves (see page 24 lines 9 and 10) or wireless media such as radio frequency and infrared microwaves (see page 24 lines 13-15) which do not fall under statutory subject matter.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1, 2, 12, 13, 15, 18, 19, 21, 22, 27 and 28 are rejected under 35 U.S.C. 102(e) as being anticipated by **Lee et al 20050117524 (hereinafter Lee)**.

Regarding **claim 1**, Lee discloses a method for supporting mobility of a wireless local area network voice terminal using a data line, comprising: performing a probe process during association signaling (see p.1-2, [0013]) between the wireless local area network voice terminal (STA, see p.1, [0013]) and a first access point (prior-AP, see p.2, [0014]) where the wireless local area network voice terminal roams to a second access point (post-AP, see p.1, [0010], [0013], p.2, [0013]-[0014]); performing a media access control address authentication process by the wireless local area network voice terminal and the second access point (authentication phase, see p.2, [0014]); performing by a circuit interface unit (STA performing a handoff from AP_A to AP_B, see p.5, [0061]), handover by using terminal information of the wireless local area network voice terminal and media access control address information of the first access-point upon the re-association request of the wireless local area network voice terminal through the second

access point (IAPP handoff procedure from AP_A to AP_B, during which the STA will send a reassociation request frame 507 to the post-AP, AP_B, and in the IAPP handoff procedure, the reassociation request contains the MAC address of the prior-AP, AP_A, and the identification information the STA, see fig. 5, p.5, [0061]); and performing an association signaling process after the handover by the wireless local area network voice terminal and the second access point (reassociation request response 509, see fig. 5, p.5, [0061]).

Regarding **claims 2, 13, 19, and 22** as applied to claims 1, 12, 18 and 21 Lee further discloses further comprising of transmitting by the second access point, additional information to the wireless local area network voice terminal (509, see fig. 5, p.5, [0061]), when the second access point receives a re-association request signal (507, see fig. 5, p.5, [0061]) from the wireless local area network voice terminal (STA, see p.1, [0013]) in the step of performing the handover by the circuit interface unit (see fig. 5, p.5, [0061]).

Regarding **claims 5 and 15** as applied to claims 1 and 12, Lee discloses wherein the step of performing the media access control address authentication process comprises: transmitting by the wireless local area network voice terminal (STA, see p.1, [0013]), a media access control authentication request signal including a media access control address to the second access point (see p.5, [0061]); performing authentication by using stored media access control address information by the second access point (see p.5, [0015]); and transmitting by the second access point, a media access control authentication completion response signal to the wireless local area network voice

terminal, when the wireless local area network voice terminal can be associated with the second access point as a result of authentication (IAPP handoff procedure from AP_A to AP_B, during which the STA will send a reassociation request frame 507 to the post-AP, AP_B, and in the IAPP handoff procedure, the reassociation request contains the MAC address of the prior-AP, AP_A, and the identification information the STA; and authentication of the STA after the reassociation response message, see fig. 5, p.5, [0061]).

Regarding **claims 12 and 21**, Lee discloses a method for supporting mobility of a wireless local area network voice terminal using a data line, comprising: performing a probe process (see p.1-2, [0013]) during an active call between the wireless local area network voice terminal (STA, see p.1, [0013]) and a first access point (prior-AP, see p.2, [0014]) where the wireless local area network voice terminal roams to a second access point (post-AP, see p.1, [0010], [0013], p.2, [0013]-[0014], p.5-6, [0068]); performing a media access control address authentication process by the wireless local area network voice terminal and the second access point (authentication phase, see p.2, [0014]); performing a handover by a circuit interface unit (STA performing a handoff from AP_A to AP_B, see p.5, [0061]) by using terminal information of the wireless local area network voice terminal and media access control address information of the first access point upon the re-association request of the wireless local area network voice terminal through the second access point (IAPP handoff procedure from AP_A to AP_B, during which the STA will send a reassociation request frame 507 to the post-AP, AP_B, and in the IAPP handoff procedure, the reassociation request contains the MAC address of the

prior-AP, AP_A, and the identification information the STA, see fig. 5, p.5, [0061]); performing an association signaling process after performing the handover by the wireless local area network voice terminal and the second access point (reassociation request response 509, see fig. 5, p.5, [0061]); and setting up a call and providing voice communication by the second access point after the association signaling process (see p.5, [0061]).

Regarding **claim 18**, Lee discloses an apparatus for supporting mobility of a wireless local area network voice terminal using a data line, comprising: a plurality of access points including a first and second access points (AP_A, AP_B, see fig. 5, p.5, [0060]); the wireless local area network voice terminal (STA, see p.1, [0013]) roams to the second access point (moving from AP_A to AP_B, see p.1, [0010], [0013], p.5-6, [0068]) and performs a probe process during association signaling between the wireless local area network voice terminal and the first access point (see p.1-2, [0013]); the wireless local area network voice terminal and the second access point perform a media access control address authentication process (authentication phase, see p.2, [0014]); and a circuit interface unit (STA performing a handoff from AP_A to AP_B, see p.5, [0061]) performs handover by using terminal information of the wireless local area network voice terminal and media access control address information of the first access point upon the re-association request of the wireless local area network voice terminal through the second access point (IAPP handoff procedure from AP_A to AP_B, during which the STA will send a reassociation request frame 507 to the post-AP, AP_B, and in the IAPP handoff procedure, the reassociation request contains the MAC address of the

prior-AP, AP_A, and the identification information the STA, see fig. 5, p.5, [0061]), the wireless local area network voice terminal and the second access point perform an association signaling process after the handover (reassociation request response 509, see fig. 5, p.5, [0061]).

Regarding **claim 27**, Lee discloses a computer-readable medium having computer-executable instructions for performing a method, comprising: performing a probe process (see p.1-2, [0013]) during an active call between the wireless local area network voice terminal (STA, see p.1, [0013]) and a first access point (prior-AP, see p.2, [0014]) where the wireless local area network voice terminal roams to a second access point (post-AP, see p.1, [0010], [0013], p.2, [0013]-[0014], p.5-6, [0068]); performing a media access control address authentication process by the wireless local area network voice terminal and the second access point (authentication phase, see p.2, [0014]); performing a handover by a circuit interface unit (STA performing a handoff from AP_A to AP_B, see p.5, [0061]) by using terminal information of the wireless local area network voice terminal and media access control address information of the first access point upon the re-association request of the wireless local area network voice terminal through the second access point (IAPP handoff procedure from AP_A to AP_B, during which the STA will send a reassociation request frame 507 to the post-AP, AP_B, and in the IAPP handoff procedure, the reassociation request contains the MAC address of the prior-AP, AP_A, and the identification information the STA, see fig. 5, p.5, [0061]); performing an association signaling process after performing the handover by the wireless local area network voice terminal and the second access point (reassociation

request response 509, see fig. 5, p.5, [0061]); and setting up a call and providing voice communication by the second access point after the association signaling process (see p.5, [0061]).

Regarding **claim 28**, Lee discloses a computer-readable medium having stored thereon a data structure comprising: a first field containing data representing performing a probe process (see p.1-2, [0013]) during association signaling between the wireless local area network voice terminal (STA, see p.1, [0013]) and a first access point (prior-AP, see p.2, [0014]) where the wireless local area network voice terminal roams to a second access point (post-AP, see p.1, [0010], [0013], p.2, [0013]-[0014], p.5-6, [0068]); a second field containing data representing performing a media access control address authentication process by the wireless local area network voice terminal and the second access point (authentication phase, see p.2, [0014]); a third field containing data representing performing by a circuit interface unit (STA performing a handoff from AP_A to AP_B, see p.5, [0061]), handover by using terminal information of the wireless local area network voice terminal and media access control address information of the first access point upon the re-association request of the wireless local area network voice terminal through the second access point (IAPP handoff procedure from AP_A to AP_B, during which the STA will send a reassociation request frame 507 to the post-AP, AP_B, and in the IAPP handoff procedure, the reassociation request contains the MAC address of the prior-AP, AP_A, and the identification information the STA, see fig. 5, p.5, [0061]); and a fourth field containing data representing performing an association

signaling process after the handover by the wireless local area network voice terminal and the second access point (see p.5, [0061]).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
6. Claims 3, 14, 20, 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Lee et al 20050117524 (hereinafter Lee)** in view of **Lappetelainen et al 6,834,045 (hereinafter Lappetelainen)**.

Regarding claims 3, 14, 20 and 23, as applied to claims 1-2, 12-13, 18-19, 21-22, Lee discloses the claimed limitation except wherein the additional information which the second access point transmits to the wireless local area network voice terminal is status information notifying whether the current status of the second access point is busy or idle.

In a similar art, Lappetelainen discloses wherein the additional information which the second access point transmits to the wireless local area network voice terminal is status information notifying whether the current status of the second access point is busy or idle (receiving a busy or idle indication signal from an access point, see col. 8, lines 45-67, col. 9, lines 1-6). It would therefore have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Lee, by having a mobile station listen to transmissions from an access point, for the benefit of determining during a handover measurement if an access point is idle or busy.

Regarding **claim 24**, as applied to claim 21-23, Lee further discloses wherein the step of performing the media access control address authentication process comprises: transmitting by the wireless local area network voice terminal (STA, see p.1, [0013]), a media access control authentication request signal including a media access control address to the second access point (see p.5, [0061]); performing authentication by using stored media access control address information by the second access point (see p.5, [0015]); and transmitting by the second access point, a media access control authentication completion response signal to the wireless local area network voice terminal, when the wireless local area network voice terminal can be associated with the second access point as a result of authentication (IAPP handoff procedure from AP_A to AP_B, during which the STA will send a reassociation request frame 507 to the post-AP, AP_B, and in the IAPP handoff procedure, the reassociation request contains the MAC address of the prior-AP, AP_A, and the identification information the STA; and

authentication of the STA after the reassociation response message, see fig. 5, p.5, [0061]).

Allowable Subject Matter

7. Claims 4, 6-11, 16, 17, 25 and 26 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Korpi et al 5,898,924 discloses a method for connection handling in communication systems with wireless signal transmission.

Thermond et al 7,277,409 discloses wireless local area network management.

Otsuka et al 6,330,448 discloses a handover arrangement for mobile station moving across the boundary of wireless cell-site stations of adjacent PBXS.

Orava et al 20030177267 discloses addressing in wireless local area networks.

Lee et al 6,657,981 discloses a system and method using packet filters for wireless network communication.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to OLUMIDE T. AJIBADE AKONAI whose telephone number is (571)272-6496. The examiner can normally be reached on M-F, 8.30p-5p.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rafael Perez-Gutierrez can be reached on 571-272-7915. The fax phone

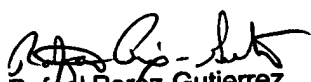
Application/Control Number:
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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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2/28/03